Common Delivery Framework

Description The Common Delivery Framework (CDF) is an ongoing research and development (R&D) initiative that focuses on improving reuse and integration of science and engineering (S&E) tools, models, and data. The CDF defines the guidance, standards, and conventions as well as the sharable functionality through common software libraries and services needed to improve how technology is delivered and inserted.

Problem The technology push today deals with how to consolidate information in a way to improve the business process. Industry's acceptance of the Web as the information delivery pipeline has sparked the technology industry to develop middleware standards that describe how information is located and shared over the Web. These Web-based technologies address interoperability and security and provide the baseline for all systems, new and old, to work together to improve how technology and information are delivered to customers, business partners, and employees. Industry has fully embraced the standard means of supporting interoperability. Typically, they use the trendy term "framework." However, the focus of industry is to provide a broad set of capabilities that can be applied to many business areas. The CDF molds these capabilities into a common approach that the U.S. Army Corps of Engineers (USACE) applies to technology delivery.

Products

- CDF Web Services. Provide programmatic access to functionality and information
- CDF Technical Notes.   Technical guidance documentation that describes how to develop and consume CDF services, set up a CDF development environment, etc.
- CDF Web Service Registry. Provides a searchable Web-accessible catalog of all services contained within the CDF, metadata describing how to use the service, and guidance for developing and registering new web services.
- S&E Data Browser. Provides access to common layer model data, via the DataNet, for a specified geographic area based on the Information Architecture.
- S&E DataNet. Provides a web-centric framework for acquiring, managing, and sharing S&E data.
- XMDF Technical Reference Document. Provides technical implementation details for software developers as well as background information, motivation and an overview of the eXtensible Model Data Format (XMDF).
- EasyHPC. Web-based client application that provides easy, secure access to HPC computing platforms.
- Content services. Repositories of S&E information available via the Web, designed to improve locating, sharing, delivery, and reuse of S&E information
- On-line Knowledge Centers. Web portals that consist of reusable components that deliver content (information) and serve as gateways to computational and data resources.

Users

USACE developers, contractors, and partners use the Web accessible library of software resources and technical guidance provided in the CDF to develop specific S&E applications and suites of applications.

Benefits/Savings

The CDF will provide the operational platform to achieve cost reductions and improved customer service through integration of technical approaches, managed reuse of component capabilities, and interoperability of data and tools. In addition, the CDF will:

- Develop a framework that meets USACE S&E objectives.
- Ensure the security, integrity, and availability of S&E functionality and information.
- Provide guidance to support the exploitation of the CDF.
- Cultivate coordination and collaboration within USACE programs.
- Support life-cycle management of USACE S&E information and technologies.
- Provide a common technology baseline.
- Provide common access to both internal and external data sources.
- Provide a common information/functionality baseline.
- Enable sharing of technology and products across research or program areas.

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